

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 January 2004 (29.01.2004)

PCT

(10) International Publication Number
WO 2004/009122 A1

(51) International Patent Classification⁷: **A61K 47/44**

(21) International Application Number:
PCT/KR2003/001443

(22) International Filing Date: 21 July 2003 (21.07.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2002-0042793 20 July 2002 (20.07.2002) KR

(71) Applicant (for all designated States except US): **KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY** [KR/KR]; 39-1, Hawolgok-Dong, Sungbook-Gu, Seoul 136-791 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHUNG, Heson** [KR/KR]; Ssangyong Apt. 3-507, Gwangyo-Dong, Nam-Gu, Incheon 402-715 (KR). **JEONG, Seo-Young** [KR/KR]; Munchonmaeul Life Apt. 205-501, Juyeop 2-Dong, Ilsan-Gu, Goyang, Gyeonggi-Do 411-747 (KR). **KWON, Ick-Chan** [KR/KR]; Siyoung Apt. 706-704,

Hagye-Dong, Nowon-Gu, Seoul 139-230 (KR). **PARK, Yeong-Taek** [KR/KR]; Taeyoung Apt. 203-602, Bono 3-Dong, Ansan, Gyeonggi-Do 425-735 (KR). **LEE, In-Hyun** [KR/KR]; 600-99, Sindaebang 1-Dong, Dongjak-Gu, Seoul 156-011 (KR).

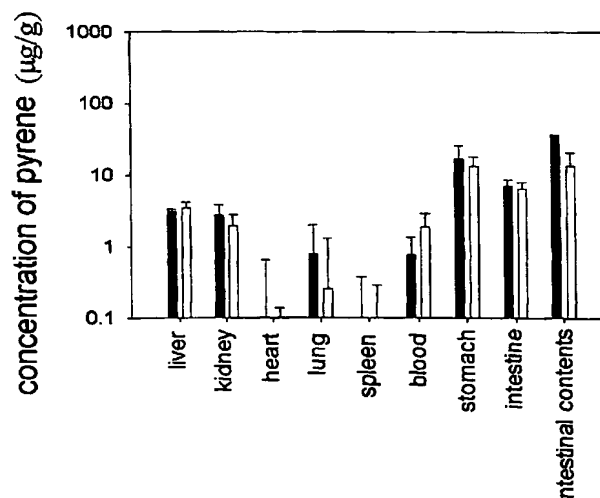
(74) Agent: **PARK, Jang-Won**; Jewoo Building 5th Floor, 200, Nonhyun-Dong, Gangnam-Gu, Seoul 135-010 (KR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: MUCOADHESIVE COMPOSITION AND FORMULATION FOR SOLUBILIZATION OF INSOLUBLE DRUGS AND PREPARATION METHOD THEREOF



(57) Abstract: The present invention relates to a novel mucoadhesive composition for solubilization of insoluble drugs; its formulation including pharmaceutical compounds; and the preparation methods thereof wherein said solubilizing composition comprises 4~90% by weight of at least one selected from the monoglycerides and 0.01~90% by weight of at least one oil. The present invention relates to a novel mucoadhesive composition including pharmaceutical compounds; and the preparation methods thereof wherein said solubilizing composition including emulsifiers is composed of 4~90% by weight of at least one selected from the monoglycerides, 0.01~90% by weight, of at least one oil, and 0.01~90% by weight of at least one selected from the emulsifiers. The compositions of the present invention is suitable as drug delivery systems since they exist as mucoadhesive liquid at physiological temperatures even though they exist as liquid or semi-solid at room temperature.